

### AMENDMENTS TO THE CLAIMS

Please amend claims 6, 8, 10, and 16, and cancel claims 1-5, 7, 9, and 11, as set forth in the listing of claims that follows:

1-5. (Cancelled)

6. (Currently Amended) The system of Claim 16 4, wherein said mat material further comprises a type of material selected from the group consisting of woven, mesh like, fibrous, cloth like, paper like, and combinations comprising at least one of the foregoing types of materials.

7. (Cancelled)

8. (Currently Amended) The system of Claim 16 7, wherein said plurality of layers of material further are held together using a binder, wherein said binder further comprises a binder selected from the group consisting of a sealing agent, an adhesive, a ceramic substance, and combinations comprising at least one of the foregoing binders.

9. (Cancelled)

10. (Currently Amended) The system of Claim 16 9, wherein said reflective surface further comprises a coating, wherein said coating further comprises a white, opaque material.

11. (Cancelled)

12. (Withdrawn) A method for managing the temperature and reaction of fuel in an energy conversion device, comprising:

dispensing an air/fuel mixture through a mat material disposed against an inlet of a reformer system;

maintaining a first temperature before said inlet that is less than a second temperature of a gas phase reaction;

inhibiting the propagation of a flame into said reformer system; and

dispensing said fuel into said reformer system.

13. (Withdrawn) The method of Claim 12, further comprising dispensing said fuel through a flame arrestor fluidly coupled to said mat material.

14. (Withdrawn) The method of Claim 13, further comprising dispensing said fuel through an inert material fluidly coupled to said flame arrestor.

15. (Withdrawn) The method of Claim 12, further comprising dispensing said fuel through an inert material fluidly coupled to said mat material.

16. (Currently Amended) A fuel reformer system, comprising:  
a reforming zone comprising a reformer catalyst substrate having an inlet;  
a mat material fluidly coupled to said inlet ~~reforming zone~~, said mat material comprising a plurality of layers of a ceramic fibrous material and having a reflective surface facing the inlet; and  
a mixing zone fluidly coupled to said mat material ~~reforming zone~~.

17. (Withdrawn) The method of Claim 16, further comprising dispensing said fuel through a flame arrestor fluidly coupled to said mat material.

18. (Withdrawn) The method of Claim 16, further comprising dispensing said fuel through an inert material fluidly coupled to said flame arrestor.

19. (Withdrawn) The method of Claim 16, further comprising dispensing said fuel through an inert material fluidly coupled to said mat material.